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ABSTRACT

This annotated bibliography of 204 references on visitor research and museum audiences is designed for museum professionals interested in the measurement of visitor reactions to museum exhibits. Citations are included for books, periodical articles, dissertations, studies, reports, and similar unpublished works. Most were published in the late 1950s, 1960s, and early 1970s. A few date back to the 1890s-1900s. Entries are listed alphabetically by author. One article is written in Spanish. The range of subject matter is broad, including the following topics: development of a multiple-choice test about artifacts in particular exhibit cases; impact of ethnic exhibits on attitudinal shifts toward ethnic groups; visitor surveys on admission fees and evening hours; potentials for the computer as a learning instrument in museums; methods used to evaluate overseas exhibits; and theories on the social nature of museum visiting. Papers about educational programs and principles of exhibit design are excluded from the bibliography because they only deal indirectly with visitor reaction to museums. (AV)

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STUDIES OF VISITOR BEHAVIOR IN MUSEUMS AND EXHIBITIONS:

AN ANNOTATED BIBLIOGRAPHY OF SOURCES PRIMARILY IN THE ENGLISH LANGUAGE

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by

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FOREWORD

The preparation of this bibliography was undertaken primarily to aid museum professionals interested in the measurement of visitor reactions to museum exhibits. Because new research reports on this subject are continually appearing, and in the hope of locating additional works on museum audience research, earlier drafts of this bibliography were circulated to a number of museologists, administrators, social scientists, and students. By such means, additional works were uncovered and errors in the original citations corrected. It was also encouraging to receive evidence that the bibliography was indeed of use to the respondents, and that it had stimulated their interest in visitor research.

It also became clearly apparent that research into visitor responses to museum materials and environments needed a more formal identity, so that persons with common interests in this work could communicate and know of the literature involved. In the hope of establishing such an identity, and because of this underlying interest in defining a specialty of museum visitor behavior, it became necessary to decide upon some criteria for inclusion of titles. For the most part, therefore, references were selected that bore as directly as possible on visitor research or on discussion of the museum audience. Among the papers excluded because they dealt only indirectly with visitor reaction to museums were those related to museum educational programs and to principles of exhibit design. Although both of these topics interface closely with visitor behavior, they are extensive specialties in their own right, and for that reason such works were included only if they contained results of visitor research or dealt directly with audience reactions.

It should be noted that in addition to books and to articles in the periodical literature, a number of dissertations, studies, reports, and similar unpublished works have been cited. The original source of these documents has been identified to the fullest degree possible. In addition, efforts are being made to keep active files of such publications on museum visitor research, both at the Department of Psychology, Colorado State University, and at the Smithsonian Institution's Office of Museum Programs. Copies of works not included in the present bibliography, as well as correspondence from individuals interested in visitor research, can be sent directly to the Office of Museum Programs.

Finally, gratitude is expressed to the Office of Museum Programs for the opportunity of carrying out this research.

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ANNOTATED BIBLIOGRAPHY

1. ABBEY, DAVID S. "Kids, Culture and Curiosity." Museum News, vol. 46, no. 7 (March 1968), pp. 30-33.

Review of research on exploratory behavior, novelty, and curiosity applied to children's museum visits.

2. _____, and DUNCAN CAMERON. "The Museum Visitor: I - Survey Design." (Number 1 in Reports from Information Services.) Toronto: Royal Ontario Museum, 1959.

Review of the procedures followed in setting up a visitor survey consisting primarily of demographic questions. The sampling procedure is designed to measure across hour of day, day of week, and season of year. (See also reference 28.)

3. _____. "The Museum Visitor: III - Supplementary Studies." (Number 3 in Reports from Information Services.) Toronto: Royal Ontario Museum, 1961.

Summary of the follow-up studies on the Royal Ontario Museum visitor survey, including a comparative study between the museum staff's view of visitors and demographic data. The museum as a neighborhood resource and a profile of the frequent visitor are also studied. (See also reference 28.)

4. _____. "Notes on Audience Research at the Royal Ontario Museum." The Museologist, no. 80 (1961), pp. 11-16.

Report on surveys conducted to measure reactions to admission charge and visiting hours. General advice on carrying out audience surveys is also included.

5. ABLER, THOMAS S. "Traffic Pattern and Exhibit Design: A Study of Learning in the Museum." Pages 104-141 in The Museum Visitor, edited by Stephan F. de Borhegyi and Irene A. Hanson. Milwaukee: Milwaukee Public Museum Publications in Museology 3, 1968.

Research project measuring the effects of traffic pattern and exhibit-case design on learning and using conventional testing procedures and variations in exhibit layout. Previous research and commentary on the methodological problems encountered are also included.

6. ANDERSON, SCARVIA B. "Noseprints on the Glass: Or How Do We Evaluate Museum Programs?" Pages 91-102 in Museums and Education, edited by Eric Larrabee. Washington, D.C.: Smithsonian Institution Press, 1968.

Review of strategies and problems encountered in evaluating the educational opportunities of museum settings and special activities such as school field trips. Evaluation methods such as tests, interviews, and physical evidence such as traces left by visitors are also mentioned.

7. "Audience Survey in the German Democratic Republic." Museums' Annual, no. 2 (1970), p. 14.

Abstract of 1969 survey of groups visiting 18 German science, natural history, and art museums. Preliminary results revealed that group leaders have very little specific training for understanding the museum and suggested that visits are motivated "as a means of integrating or deepening a cultural experience rather than as a source of information."

8. BECHTEL, ROBERT B. "Hodometer Research in Museums." Museum News, vol. 45, no. 7 (March 1967), pp. 23-26.

9. _____. "Human Movement and Architecture." Trans-action, vol. 4, no. 6 (May 1967), pp. 53-56.

Changes in locomotor exploratory behavior because of environmental cues such as different displays or paintings, are monitored by means of an hodometer (a floor grid sensitive to pedestrian movement) fitted to a small room or gallery, combined with apparatus to count movements. Because knowledge of being observed can influence visitor movement in a gallery, the unobtrusive hodometer is an useful device.

10. BENNETT, GEORGE K. "The Museum Technique Applied to Market Research." Journal of Consulting Psychology, vol. 5 (1941), pp. 183-186.

Summary of some principles of museum behavior formulated by Robinson, Melton, and others, and how such techniques could be applied to commerical exhibit designs.

11. BIGMAN, STANLEY K. "Art Exhibit Audiences: Selected Findings on Who Comes? Why? With What Effects?" The Museologist, no. 59 (1956), pp. 6-16 and no. 60 (1956), pp. 2-6.

While the research reported in this summary is typical of exhibit evaluation and audience measurement, the results are distinctive since the data was gathered from three cities. (A more complete report is found in reference 23.)

12. BLOOMBERG, MARGUERITE. "An Experiment in Museum Instruction." (Number 8 in Publications of the American Association of Museums New Series.) Washington, D.C.: American Association of Museums, 1929.

Description of a classic experimental study on varying methods of museum school-tour instruction that distinguishes between formal instruction and arousal of exploratory behavior in children. Immediate and delayed testing of children for recall of material learned in the museum were compared. The preparation of children for their museum trip was found to contribute significantly to the result of the visit.

13. BORHEGYI, STEPHAN F. de. "Museum Exhibits: How to Plan and Evaluate Them." Midwest Museums Quarterly, vol. 23, no. 2 (1963), pp. 4-5.

States the need for exhibit evaluation and the use of special test exhibits to measure visitor retention and participation.

14. _____. "Space Problems and Solutions." Museum News, vol. 42, no. 3 (Nov. 1963), pp. 18-22.

Discussion of spatial areas in the museum, heavily influenced by Edward Hall's The Silent Language.

15. _____. "Testing an Audience Reaction to Scientific and Anthropological Museum Exhibits." Page 7 in The Museum Visitor, edited by Stephan F. de Borhegyi and Irene A. Hanson. Milwaukee: Milwaukee Public Museum Publications in Museology 3, 1968.

Philosophy of a museum administrator committed to visitor research. (See reference 16 for a more complete report.)

16. BORHEGYI, STEPHAN F. de. "Testing of Audience Reaction to Museum Exhibits." Curator, vol. 8, no. 1 (1965), pp. 86-93.

Principles for crowd-flow control and exhibit design based upon limited research. Exhibit properties are related to conditions of crowd movement such as variable and constant flow.

17. _____. "Test Your Knowledge." Midwest Museums Quarterly, vol. 25, no. 4 (1965), p. 10.

Summary of the development of a multiple-choice test around the artifacts in one exhibit case so that visitors could test themselves to measure their understanding of the display.

18. _____. "Visual Communication in the Science Museum." Curator, vol. 6, no. 1 (1963), pp. 45-57.

Mentions ways to improve the communication value of exhibits, such as dramatic labels and lighting, and reveals the manner in which the researcher manipulated the attention and interest-holding variables of exhibits.

19. BOSE, A. B. "The Pattern of Communication in an Exhibit." Indian Journal of Social Research, vol. 4 (1963), pp. 23-30.

Museum visits of illiterate and literate visitors to a government exhibit were compared by unobtrusive observation and testing.

20. BOULDING, KENNETH E. "The Role of the Museum in the Propagation of Developed Images." Technology and Culture, vol. 7 (1966), pp. 64-66.

View of the museum as conveyor of perceptions about subcultures within a society and the attitudes and values influenced by museum environments.

21. BOWER, ROBERT T. The People's Capitalism Exhibit: A Study of Reactions of Foreign Visitors to the Washington Preview. Washington, D.C.: The American University, Bureau of Social Science Research, 1956.

Exhibit materials for an USIA exhibit are pretested to sample public reactions before the formal opening of the exhibit.

22. BOWER, ROBERT T., STANLEY K. BIGMAN, and S. J. NIEFIELD. Audience Reactions to Two ICS Cultural Exhibits: Report on the Pre-Test of a Questionnaire. Washington, D.C.: The American University, Bureau of Social Science Research, 1954.

Demonstrates the value of pretesting exhibits before public release, discusses defining measurable objectives for exhibits, and explains the construction of a model audience questionnaire.

23. _____, and LAURE SHARP. The Japanese Art Exhibit: A Study of Its Impact in Three Cities. Washington, D.C.: The American University, Bureau of Social Science Research, 1955.

Final report of research undertaken to measure attitudinal shifts towards Japanese people after viewing a traveling Japanese art exhibit. Study demonstrates use of publicity to stimulate attendance and problems encountered in meeting the expectations of visitors attracted by such campaigns. General exhibit-evaluation data are collected and comparisons made among results in three cities.

24. _____. The Japanese House: A Study of Its Visitors and Their Reactions. Washington, D.C.: The American University, Bureau of Social Science Research, 1955.

Do attitudinal shifts occur toward the Japanese people after viewing a model Japanese house? Study done in conjunction with and a comparison to The Japanese Art Exhibit. (See reference 23.)

25. _____. "The Use of Art in International Communication: A Case Study." The Public Opinion Quarterly, vol. 20 (1956), pp. 221-229.

Essentially a summary of projects reported in references 23 and 24.

26. BROOKS, JOYCE A. M., and PHILIP E. VERNON. "A Study of Children's Interests and Comprehension at a Science Museum." British Journal of Psychology, vol. 47 (1956), pp. 175-182.

Multiple measurement study of children's reactions and attention to science materials which shows that a project of modest scale can supply useful evaluative data.

27. CALVER, HOMER N. "The Exhibit Medium." American Journal of Public Health, vol. 29 (1939), pp. 341-346.

Guidelines for effective exhibit techniques which engage visitor attention. How such devices function, the pros and cons of each technique and the psychological justification for their implementation are discussed.

28. _____, MAYHEW DERRYBERRY, and IVAN N. MENSH. "Use of Ratings in the Evaluation of Exhibits." American Journal of Public Health, vol. 33 (1943), pp. 709-714.

Explanation of the reliability of ratings given exhibits as a tool in the evaluation of visitor reactions. Ratings of different audience groups are compared and considerable disagreement occurs because of the difficulty of defining exhibit criteria.

29. CAMERON, DUNCAN F. "Effective Exhibits -- A Search for New Guidelines. The Evaluator's Viewpoint." Museum News, vol. 46, no. 5 (Jan. 1968), pp. 43-45.

Author's rationale for exhibit evaluation that generally reiterates many of the problems of exhibit evaluation, such as design and instrumentation of evaluative efforts.

30. _____. "How Do We Know What Our Visitors Think?" Museum News, vol. 45, no. 7 (March 1967), pp. 31-33.

Framework for preparing a visitor study, including some of the problems involved in learning about museum audiences.

31. _____. "The Numbers Game." Canadian Museums' Association Gazette, vol. 4, no. 1 (1970), pp. 11-15.

Focuses on improving the quality of attendance data by providing more complete breakdowns of categories of visitors and presents practical tips on audience measurement.

32. _____. "A Viewpoint: The Museum as a Communications System and Implications for Museum Education." Curator, vol. 11, no. 1 (1968), pp. 33-40.

Broad discussion in which ideas on the communication properties of museum exhibits are proposed. Defines what exhibit-visitor communication is and the limitations of group visits to museums.

33. CAMERON, DUNCAN F., and DAVID S. ABBEY. "Investigating a Museum's Audience." The Museologist, no. 77 (1960), pp. 2-7.

Summary of Royal Ontario Museum visitor studies reported in more detail in the Royal Ontario Museum "Museum Visitor" series.

34. _____. "Museum Audience Research." Museum News, vol. 40, no. 2 (Oct. 1961), pp. 34-38.

Emphasizes the need for museums to do audience research and suggests some specific studies that could be undertaken, such as measuring the interests of visitors.

35. _____. "Museum Audience Research: The Effect of an Admission Fee." Museum News, vol. 41, no. 3 (Nov. 1962), pp. 25-28.

Summarizes a visitor survey on admission fees and provides comparative data related to an earlier Royal Ontario Museum survey.

36. _____. "The Museum Visitor: II - Survey Results." (Number 2 in Reports from Information Services.) Toronto: Royal Ontario Museum, 1960.

Report on the Royal Ontario Museum survey consisting primarily of demographic and descriptive questions. (See also references 2 and 3.)

37. _____. "Toward Meaningful Attendance Statistics." Bulletin of the Canadian Museums Association, vol. 12, no. 3 (1960), pp. 6-10.

Methodological comment on visitor counts and recommended procedures for increasing accuracy. Attendance measures and devices such as turnstyles and amount of gallery traffic are compared and sample techniques for calculating coefficients of visitor traffic presented.

38. _____. "Visits Versus Visitors: An Analysis." Museum News, vol. 39, no. 3 (Nov. 1960), pp. 34-35.

Raises questions about accuracy of museum attendance counts by noting the need to distinguish between new and repeat visitors.

39. CAMERON, DUNCAN F., DAVID S. ABBEY, THEODORE A. HEINRICH, and WILLIAM J. WITHROW. "The Public and Modern Art." Museum: A Quarterly Review, vol. 22, nos. 3-4 (1969), pp. 127-152.

Examination of thematic and stylistic qualities which the public prefers in 20th century art.

40. CHRISTENSEN, ERWIN O. "Evening Hours for Museums: A Preliminary Statistical Survey." Museum News, vol. 43, no. 3 (Nov. 1964), pp. 40-41.

Summarizes museum polls which ask if museums should have evening hours and cites problems involved when hours are extended.

41. COHEN, MARILYN S. "Facility Use and Visitor Needs in the National Museum of History and Technology, The Smithsonian Institution, Washington, D. C." Office of Museum Programs, Smithsonian Institution, November 1973. (mimeograph)

Demographic survey employing pre-visit interviews and post-visit questionnaires. Factors stressed are length of visit, distance walked, visitor fatigue, and how the size of a group affects the visit.

41a. _____. "The State of the Arts of Museum Visitor Orientation: A Survey of Selected Institutions." Office of Museum Programs, Smithsonian Institution, April 1974. (mimeograph)

A survey of museum visitor orientation programs in twelve museums primarily on the east coast. The effectiveness of the orientation is evaluated in terms of visitor behavior.

41b. _____. "A Yale University Art Gallery Survey." Department of Art History, Yale University, New Haven, Connecticut, 1972. (mimeograph)

A multipurpose survey was completed by 500 visitors to the Yale Art Gallery. Questionnaire sampled visitor characteristics, use of the facility, audience preference, and reactions to labeling techniques.

42. COLEMAN, LAURENCE VALE. Historic House Museums. Washington, D.C.: American Association of Museums, 1933.

Ways to orient visitors to historic houses, with guides on visiting hours, publicity, signs, maps, and special activities are suggested.

43. COOLEY, WILLIAM, and TERRENCE PIPER. "Study of the West African Art Exhibit of the Milwaukee Public Museum and Its Visitors." Pages 144-165 in The Museum Visitor, edited by Stephan F. de Borhegyi and Irene A. Hanson. Milwaukee: Milwaukee Public Museum Publications in Museology 3, 1968.

Investigators collected standard visitor profile data but increased its scope by assessing the degree of prejudice towards Afro-Americans reflected in visitor reactions to the exhibit.

44. COUTTS, HERBERT. "The Antiquities Gallery of Dundee Museum: A Visitor Survey." Museums Journal, vol. 70, no. 4 (1971), pp. 173-174.

A questionnaire is employed to discover public reactions to displays in a specific gallery. Results include reactions to labels and suggestions for a new gallery.

45. CROCKER, C. R. "A Survey of Visitors and an Appraisal of Existing Display Policies." Museums' Annual, no. 2 (1970), p. 9.

Abstract of survey results from two different questionnaires distributed at the Institute of Applied Science, Melbourne, requesting demographic information and general opinions of displays.

46. CRUTCHER, EDWARD B. "Museum Attendance of Children and Related Factors." Doctoral dissertation, George Peabody College for Teachers, Nashville, Tennessee, 1966.

Factors such as intelligence and socio-economic status are related to museum attendance patterns in children.

47. CUMMINGS, CARLOS E. East is East and West is West: Some Observations on the World's Fairs of 1939 by One Whose Main Interest is in Museums. Buffalo: Buffalo Museum of Science, 1940.

Based on observations by a panel of museologists visiting the 1939 World Fairs, this work is still useful as a source and catalog of ideas and subjects for visitor studies. Visitor-related topics such as use of attendants in exhibits, demonstrations, labeling, and traffic flow are examined, and comparisons are made between museums and special exhibitions such as fairs.

48. DAIFUKU, HIROSHI. "The Museum and the Visitor." Pages 68-72 in The Organization of Museums: Practical Advice. Paris: UNESCO, 1960.

An omnibus paper that covers many topics, including the history of visitor research and the efforts of museums to attract a wider audience.

49. DANDRIDGE, FRANK. "The Value of Design in Visual Communication." Curator, vol. 9, no. 4 (1966), pp. 331-336.

Treats aspects of display design that can make a significant difference in the educational value of an exhibit. Variables such as eye movement, kind of typesetting, and use of peripheral vision are reviewed in relation to exhibit design.

50. DANQUIST, GERALD A., CHARLES G. DEANHART, ROBERT J. LOARIE, ROBERT W. MASON, BARRY R. WEISS, and RICHARD M. WILKINS. "A Marketing Study of the Smithsonian National Associates." Master's thesis, Harvard University, 1971.

Investigation of the Smithsonian Associates Program and the Smithsonian Magazine, involving a national survey, group interviews, and phone interviews in specific locales. Membership and the audience for publications were surveyed.

51. DAS GUPTA, C. C. "On the Use of Museums for Illiterate in India." Journal of Indian Museums, vol. 7 (1951), pp. 38-41.

Encourages research into the problem of the illiterate museum visitors and suggests how to make the museum more useful to them.

52. DOUGHTY, PHILIP S. "The Public of the Ulster Museum: A Statistical Survey." Museums Journal, vol. 68, no. 1 (1968), pp. 19-25.

Patterns of attendance, demographic variables, and duration and motivation of visits are among the items surveyed.

53. DROBA, D. D. "Effect of Printed Information on Memory for Pictures." Museum News, vol. 7, no. 5 (1929), pp. 6-8.

A summary of thesis research conducted in a laboratory setting and directed by Edward S. Robinson to measure the effects of exposure time and the amount of information contained in labels on recall of works of art. Demonstrates that controlled experiments can be carried out using variables of interpretation.

54. EISENBEIS, MANFRED. "Elements for a Sociology of Museums." Museum: A Quarterly Review, vol. 24, no. 2 (1971), pp. 110-119.

Research conducted to measure attitudes toward museums and other cultural institutions that emphasizes the museum as a social institution. Represents the problem-oriented survey research of European investigators rather than American approaches emphasizing visitor descriptions.

55. ERWIN, DAVID G. "The Belfast Public and the Ulster Museum: A Statistical Survey." Museums Journal, vol. 70, no. 4 (1970), pp. 175-179.

The survey attempts to discover why people do or do not visit museums by randomly sampling Belfast residents in the street.

56. EVANS, I. M. "Specimens or People: A Question of Communication." Museums Journal, vol. 69, no. 3 (1969), pp. 107-109.

Enumerates reasons why displays sometimes don't reach the museum visitor. Suggested improvements include making the exhibit more interactive and organizing exhibits into primary displays designed for the general public and secondary displays for students and experts.

57. FAZZINI, DAN. "The Museum as a Learning Environment: A Self-Motivating, Recycling, Learning System for the Museum Visitor." Doctoral dissertation, University of Wisconsin-Milwaukee, 1972.

Thesis examining the variables affecting the behavior of museum visitors when they use automated self-testing machines to facilitate learning from exhibits.

58. FECHNER, G. T. Vorschule der Aesthetik. Leipzig: Breitkopf and Hartel, 1897.

This early work attempts to measure visitor reactions to works of art.

59. FRARY, I. T. "Retaining the Public's Interest." Museum News, vol. 14, no. 6 (1936), pp. 7-8.

Paper suggesting ways to maintain museum visitor interest by the use of lectures and other formal education programs.

60. FRESE, H. H. "The Living Museum: Educational World in the National Museum of Ethnology, Leyden." Museum: A Quarterly Review, vol. 10, no. 4 (1957), pp. 297-299.

The living museum brings objects to life by having children dress in museum costumes, use artifacts, and put on a play.

61. GIBSON, KATHERINE. "An Experiment in Measuring Results of Fifth Grade Class Visits to an Art Museum." School and Society, vol. 21, no. 554 (May 25, 1925), pp. 658-662.

Experimental study on children and museum learning relating the intellectual level of the child to the amount of material learned on school trips at the museum.

61a. GILMAN, BENJAMIN I. "Museum Fatigue." The Scientific Monthly, vol. 12, no. 1 (1916), pp. 62-74.

Photographs of visitors examining objects in a variety of displays were used as the basis of determining the degree of physical exertion which each type of installation required. Recommendations were made for shallow eye-level cases.

62. GOINS, ALVIN, and GEORGE GRIFFENHAGEN. "The Effect of Location and a Combination of Color Lighting and Artistic Design on Exhibit Appeal." The Museologist, no. 67 (1958), pp. 6-10.

63. _____. "Psychological Studies of Museum Visitors and Exhibits at the U.S. National Museum." The Museologist, no. 64 (1957), pp. 1-6.

Two discussions of the medical sciences division of the U.S. National Museum which serve as pilot projects: one compares reactions to an exhibit case before and after modernization and the other explores means of determining important attraction and comprehension factors of exhibits.

64. GOLDBERG, NITA. "Experiments in Museum Teaching." Museum News, vol. 10, no. 15 (1933), pp. 6-8.

Summary of findings on experiments conducted to compare the effectiveness of different methods of teaching science in museums. Lecture tours are compared with discussion groups and game cards are used to direct the children's attention to labels and features of the exhibits.

65. HASSLER, WILLIAM G. "Exhibit Patterns Which Keep the Public Coming." Preparation and exhibit program of a children's museum, Children's Museum, Nashville, Tennessee. (Undated mimeograph)

General discussion about keeping up public interest and attendance by planning and changing exhibits.

66. JOHNSON, DAVID. "Museum Attendance in the New York Metropolitan Region." Curator, vol. 12, no. 3 (1969), pp. 201-230.

Demographic study of museum visitors, involving both large and small institutions in a metropolitan region and thereby supplying comparative information about access to different types of museums.

67. KEARNS, WILLIAM E. "Studies of Visitor Behavior at the Peabody Museum of Natural History, Yale University." Museum News, vol. 17, no. 14 (1940), pp. 5-8.

Abstract of Mildred Porter's work in three different exhibit halls, focusing on attention to entrances and exits, handout leaflets, use of attendants and time spent in different areas.

68. KIMMEL, PETER S., and MARK J. MAVES. "Public Reaction to Museum Interiors." Museum News, vol. 51, no. 1 (Sept. 1972), pp. 17-19.

Multidimensional psychological scaling is employed to measure public reaction to specific characteristics of the visual environment in museums such as space, lighting, color and readability.

69. KISSILOFF, WILLIAM. "Learning Through Involvement." Audiovisual Instruction, May 1970, pp. 95-96.

Description of the U.S. Internal Revenue Service Building Visitor Exhibit and the use of mixed-media and learner-operated devices to achieve maximum visitor involvement.

70. KNEZ, EUGENE I., and A. GILBERT WRIGHT. "The Museum as a Communications System: An Assessment of Cameron's Viewpoint." Curator, vol. 13, no. 3 (1970), pp. 204-211.

Reply to Cameron's paper (reference 32) on what constitutes communication in museum exhibits, implying that he undervalues interpretative materials as part of museum communication.

71. KRASNEGOR, REBECCA. Smithsonian Audience Survey. Washington, D.C.: The American University, Bureau of Social Science Research, 1967.

How a visitor survey is pretested. (See also reference 193.)

72. LEE, ROBERT S. "The Future of the Museum as a Learning Environment." Pages 367-388 in Computers and Their Potential Applications in Museums, edited by Edmund A. Bowles. New York: Arno Press, 1968.

Outlines potentials for the computer as a learning instrument in the museum environment and emphasizes Montessori educational theory.

73. LOOMIS, ROSS J. "Museums and Psychology: The Principle of Allometry and Museum Visitor Research." The Museologist, no. 129 (1973), pp. 17-23.

Different strategies for performing visitor research are suggested and examples cited.

74. LOOMIS, ROSS J. "Please! Not Another Visitor Survey!" Museum News, vol. 52, no. 2 (Oct. 1973), pp. 21-26.

Topics typically measured in visitor surveys are enumerated; some limitations of surveys and alternative methods of research are mentioned.

75. _____. "Social Learning Potentials of Museums." Presented at a conference of the American Educational Research Association, Chicago, Illinois, 1974. (mimeograph)

Applications of social psychology are made to visitor learning in museums. The social aspects of a museum visit are stressed and problems such as engaging new audience groups, attitude change induced by exhibits, crowding, socially based learning criteria, and the relationship of social psychology to visitor research are discussed.

76. LOTTER, V., and E. BOTHA. "Preliminary Survey of the Visiting Population of the South African Museum, Cape Town." South African Museums Association Bulletin, vol. 7 (1962), pp. 340-350.

Description of a brief demographic survey.

77. MacBRIAR, WALLACE N., Jr. "Testing Your Audience." Museum News, vol. 42, no. 8 (April 1964), pp. 15-17.

Description of the work of the Milwaukee Public Museum Information Services Office, which was partly designed to supervise visitor studies. Shows how one major museum performed visitor research during the 1960s.

78. MARCOUSÉ, RENÉE. "Personal Response." Museums Journal, vol. 67, no. 3 (1967), pp. 239-242.

Report on a pilot study conducted by ICOM to seek ways in which a museum may increase children's awareness and enjoyment of objects through more direct interaction with them.

79. MARSHALL, W. E. "A Viewpoint." Midwest Museums Quarterly, vol. 23, no. 1 (1963), pp. 9-11.

General discussion that advocates more testing of exhibit effects and exhibit planning with visitor reaction in mind.

80. MARTIN, ROBERT. "A Formalist Approach to Museum Communication." Department of Art History, Yale University, 1973. (unpublished)

Review of trends in museum visitor research, such as the museum as a unique environment and social institution.

81. McDONALD, P. M. "Audience Surveys in Australia." Museums' Annual, no. 2 (1970), p. 8.

Abstract of a series of typical visitor surveys conducted in Australian museums during the 1960s.

82. MELTON, ARTHUR W. "Distribution of Attention in Galleries in a Museum of Science and Industry." Museum News, vol. 14, no. 3 (1936), pp. 5-8.

Outline of earlier studies, which treat the influence of motion in exhibits and label placement on attracting and holding attention.

83. _____. "Problems of Installation in Museums of Art." (Number 14 in Publications of the American Association of Museums New Series.) Washington, D.C.: American Association of Museums, 1935.

Reporting the results of a number of studies in the research program initiated by E. S. Robinson, this monograph provides the most complete coverage of Melton's work and reveals the rationale and methodology for the unobtrusive measurements used. Variables of installation such as location of exhibit and the number and homogeneity of objects displayed are researched.

84. _____. "Some Behavior Characteristics of Museum Visitors." The Psychological Bulletin, vol. 30 (1933), pp. 720-721.

Abstract for a talk summarizing the early Robinson and Melton work. The right-hand turn bias and the attraction gradient of the exit are emphasized.

85. _____. "Studies of Installation at the Pennsylvania Museum of Art." Museum News, vol. 10, no. 15 (1933), pp. 5-8.

More attention-span data are reported for art exhibits and patterns of visitor movement through the whole gallery area are traced. A classification of types of visitor exploratory behavior is established.

86. MELTON, ARTHUR W. "Visitor Behavior in Museums: Some Early Research in Environmental Design." Human Factors, vol. 14, no. 5 (1972), pp. 393-403.

Excerpts from early Melton museum papers on environmental psychology. Of interest is the experimental and unobtrusive observational approach to museum behavior and the practical nature of the areas studies, such as number of objects displayed, their isolation or grouping, their positioning, and use of labels.

87. _____, NITA GOLDBERG, and CHARLES W. MASON. "Experimental Studies of the Education of Children in a Museum of Science." (Number 15 in Publications of the American Association of Museums New Series.) Washington, D.C.: American Association of Museums, 1936.

Investigation of the relative educational effectiveness of various methods of instruction (visual aids, illustrated lectures, pre-tour preparation) and other considerations in the formal visits of school children (grades 5-8) to the Buffalo Museum of Science.

88. MITTLER, ELLIOTT, and WALTER WALLNER. A Membership Study of the Los Angeles County Museum of Art. Los Angeles: UCLA Graduate School of Business Administration, 1967.

Museums can measure the reactions of its members to the benefits provided by their memberships as here demonstrated by a telephone survey of Los Angeles County Museum of Art associates. Membership drives and programs of a sample of art museums across the country are also described.

89. MOCHON, MARION JOHNSON. "Visitor Testing in the Museum." Pages 72-74 in The Museum Visitor, edited by Stephan F. de Borhegyi and Irene A. Hanson. Milwaukee: Milwaukee Public Museum Publications in Museology, 3, 1968.

Reviews frequent difficulties encountered in testing museum visitors, and the strategies used to measure visitor reactions.

90. MONZÓN, ARTURO. "Bases para Incrementar el Publico qué Visita el Museo Nacional de Antropologia." Anales de Instituto Nacional de Antropologia e Historia, vol. 6, no. 2a (1952), pp. 87-131.

Survey that compares foreign and native visitors and their interests in the National Museum of Anthropology, Mexico City.

91. MORRIS, RUDOLPH E. "Leisure Time and the Museum." Museum News, vol. 41, no. 4 (Dec. 1962), pp. 17-21.

Classifies different types of visitors, visits, and motivations for coming to the museum and suggests that museums are best attended with others.

92. MUNYER, EDWARD A. A Preliminary Survey of the Hall of Physical Anthropology, Museum of Natural History, Washington, D.C. Washington, D.C.: Smithsonian Institution Summer Institute in Display, 1969.

Visitor survey and observation conducted to determine visitor response to displays of different design and varying amounts of information. Parent-child interaction in the exhibit setting is also studied.

93. MURRAY, C. HAY. "How to Estimate a Museum's Value." Museums Journal, vol. 31 (1932), pp. 527-531.

Walking time is the value factor employed to gauge the success of exhibits and visitor responses.

94. Museum of Science and Industry. "Attendance Survey." Museum of Science and Industry, Chicago, Illinois, 1958. (mimeograph)

Survey providing a profile of visitors' places of residence as an indicator of the national attraction of a major American museum.

95. NAHEMOW, LUCILLE. "The Comprehension of Museum Environments." Environmental Psychology Program, City University of New York, 1970. (mimeograph)

A rationale for museum visitor research. (See reference 96.)

96. _____. "Research in a Novel Environment." Environment and Behavior, vol. 3, no. 1 (March 1971), pp. 81-102.

Pilot study defining both environmental and social variables for studying visitors' curiosity and learning, and structural and experiential ways of comprehending the environment.

97. The New York State Education Department and Janus Museums Consultants, Limited, Toronto, Canada. The 1966 Audience of the New York State Museum. Albany: Division of Evaluation, State Education Department, The State University of New York, 1968.

General survey consisting of demographic, access and evaluation items. One-third of those sampled completed a follow-up questionnaire at the end of their visit.

98. NICOL, ELIZABETH H. The Development of Validated Museum Exhibits. Project No. 5-0245, Contract No. OECI-6-050245-1015. Washington, D.C.: Bureau of Research, U.S. Department of Health, Education and Welfare, 1969.

Research conducted at the Boston Children's Museum with special exhibit materials designed for children demonstrates that children's reactions to exhibit materials can be measured and exhibit learning potentials validated.

99. NIEHOFF, ARTHUR. "Audience Reaction in the Milwaukee Public Museum: The Winter Visitors." Pages 22-31 in The Museum Visitor, edited by Stephan F. de Borhegyi and Irene A. Hanson. Milwaukee: Milwaukee Public Museum Publications in Museology 3, 1968.

Second part of a visitor study, primarily dealing with local visitors rather than summer tourists. (See reference 100.)

100. _____. "Characteristics of the Audience Reaction in the Milwaukee Public Museum." Midwest Museums Quarterly, vol. 13, no. 1 (1953), pp. 19-24.

Reports the results of a typical survey to provide a profile of a museum's audience.

101. _____. "Evening Exhibit Hours for Museums." The Museologist, no. 69 (1958), pp. 2-5.

Examines a survey of 40 museums to determine how many keep evening hours and the pros and cons of extended visitor hours.

102. NIEHOFF, ARTHUR. "The Physical Needs of the Visitor." Lore, vol. 6 (1956), pp. 155-157.

Discusses ways in which visitors' physical problems (such as fatigue) were considered in the planning of a new museum.

103. NIELSON, L. C. "A Technique for Studying the Behavior of Museum Visitors." The Journal of Educational Psychology, vol. 37 (1948), pp. 103-110.

Detailed report and evaluation of an early photographic technique for observing visitors.

104. OWEN, DAVID E. "Are National Museums in the Provinces Necessary? A Brief Survey of Manchester Visitors to London Museums." Museums Journal, vol. 70, no. 1 (June 1970), p. 29.

Survey determining if visits to local museums and galleries depend on previous visits to larger national institutions. Results support the need for local museums because a majority of respondents had never visited the major national institutions.

105. PARR, A. E. "Information, Vocabulary, Motivation and Memory." Museum News, vol. 46, no. 9 (May 1968), pp. 28-29.

Review of important factors involved in the learning process which are related to the museum setting.

106. _____. "Marketing the Message." Curator, vol. 12, no. 2 (1969), pp. 77-82.

Exploration of broader goals for exhibit communication than transmission of facts and information. Should be read in conjunction with reference 20.

107. _____. "Remarks on Layout, Display, and Response to Design." Curator, vol. 7, no. 2 (1964), pp. 131-142.

Suggestions for museum exhibit techniques derived from commercial store displays geared toward the visitor (i.e., exhibit patterns to eliminate museum fatigue, and efforts to concentrate attention on an object without distractions).

108. PARR, A. E. "Talk Given by A. E. Parr at the International Design Conference in Aspen, 1954." Printed leaflet edited from tape recording. (No publication data available.)

Criticizes standardization in design and espouses design that creates moods and influences behavior patterns.

109. PARSONS, LEE A. "Systematic Testing of Display Techniques for an Anthropological Exhibit." Pages 82-98 in The Museum Visitor, edited by Stephan F. de Borhegyi and Irene A. Hanson. Milwaukee: Milwaukee Public Museum Publications in Museology 3, 1968.

Report on a study of display techniques in which kinds of labels (interrogative vs. declarative), visual complexity, and color variation are investigated.

110. PARSONS, MARGARET, and ROSS J. LOOMIS. "Visitor Traffic Patterns: Then and Now." Office of Museum Programs, Smithsonian Institution, Washington, D.C., 1973. (mimeograph)

The unobtrusive observational methods of Robinson and Melton are used to build a visitor attention profile for specific components of a pharmacy hall exhibit. The project integrates early and contemporary visitor research.

111. "Pennsylvania Museum Classifies Its Visitors." Museum News, vol. 7, no. 15 (1930), pp. 7-8.

Visitor survey consisting of a demographic study made on the museum's first-year visitors.

112. PIEROTTI, RAY. "Be...See...Touch...Respond." Museum News, vol. 52, no. 4 (Dec. 1973), pp. 43-48.

Describes features of participatory exhibitions and documents visitor reactions to different exhibit styles.

113. POMORSKI, JERZY M. "Recent Audience Surveys in Poland." Museums' Annual, no. 2 (1970), pp. 17-19.

Reviews surveys taken in Poland and explains how their conclusions may be implemented.

114. PORTER, MILDRED C. B. "Behavior of the Average Visitor in the Peabody Museum of Natural History, Yale University." (Number 16 in Publications of the American Association of Museums New Series.) Washington, D.C.: American Association of Museums, 1938.

Study of visitor attention time in exhibit halls and efforts to influence visitor behavior with orientation devices such as signs and pamphlets.

115. POWEL, LYDIA. The Art Museum Comes to School. New York: Harper and Brothers, 1944.

Although visitor behavior is not the primary interest, this study does document a traveling exhibit and suggests some criteria for measuring student reaction to art.

116. POWELL, LOUIS H. "Evaluating Public Interest in Museum Rooms." Museum News, vol. 11, no. 15 (Feb. 1934), p. 7.

Study based on C. Hay Murray's technique of measuring visitor interest in terms of length of time spent walking through individual halls. Uses the difference in times recorded before and after alterations as an index of visitor reaction to hall modernization.

117. _____. "A Study of Seasonal Attendance at a Mid-West Museum of Science." Museum News, vol. 16, no. 3 (June 1938), pp. 7-8.

One of the first efforts to follow attendance patterns across seasonal change. Trends in group and individual attendance are noted.

118. RAMSEY, MARGARET A. "Space for Learning." Museum News, vol. 52, no. 6 (March 1974), pp. 49-51.

Application of environmental psychology and structural balance theory from sociology to museum visitor behavior. Data was collected at the Maxwell Museum of Anthropology, Albuquerque, New Mexico.

119. RAYMENTON, HEWSTONE K. "A Visitor's View of Museum Labelling." Museum News, vol. 15, no. 10 (Nov. 1937), p. 8.

Brief statement on the basic aspects of labelling, especially "end labelling," or general information labels placed at the end or side of cases.

120. REA, PAUL MARSHALL. "How Many Visitors Should Museums Have?" Museum News, vol. 8, no. 1 (May 1930), pp. 9-12.

Assessment of museum popularity on the basis of ratio of visitor attendance to metropolitan population, a losing proposition for museums located in large cities.

121. REED, VERGIL D. Report and Recommendations on Research Methods Used to Determine the Impact of and Reactions to the U.S. Official Exhibits in International Trade Fairs with Special Emphasis on an Evaluation of the Usual Methods as Applied at the Tokyo Fair, May 5-9, 1957. Washington, D.C.: Office of International Trade Fairs, United States Information Agency, 1957.

Analysis of methods used to evaluate overseas exhibits that questions the validity of much of this evaluative research.

122. REEKIE, GORDON. "Toward Well-Being for Museum Visitors." Curator, vol. 1, no. 1 (1958), pp. 91-94.

A catalog of visitor comforts and orientation aids which may reduce museum fatigue.

123. REESE, DAVID, and EMMA MOORE. "The Art Museum and the Public School: An Experiment." Museum News, vol. 40, no. 6 (Feb. 1962), pp. 30-33.

Experimental study advising that children be prepared for their visits to the museum.

124. REIMANN, IRVING G. "Post-Mortem on a Museum Questionnaire." The Museologist, no. 63 (1957), pp. 1-6.

Guide to constructing a short visitor questionnaire based on questions that did and did not work in a study at the University of Michigan Exhibit Museum, Ann Arbor.

125. ROBINSON, EDWARD STEVENS. "The Behavior of the Museum Visitor." (Number 5 in Publications of the American Association of Museums New Series.) Washington, D.C.: American Association of Museums. 1928.

The first major publication on museum visitor research, this monograph presents both the unobtrusive observational methods used and their results, raises the possibility that museum fatigue is more a question of psychology than physical discomfort, and conducts experiments in a natural setting.

126. _____. "Exit the Typical Visitor." Journal of Adult Education, vol. 3, no. 4 (1931), pp. 418-423.

127. _____. "Experimental Education in the Museum -- A Perspective." Museum News, vol. 10, no. 16 (Feb. 1933), pp. 6-8.

Outlines techniques to help museums experiment with their educational methods, including the suggestion that museums systematically alter interior dimensions to achieve different effects on visitors.

128. _____. "Psychological Problems of the Science Museum." Museum News, vol. 8, no. 5 (Sept. 1930), pp. 9-11.

129. _____. "Psychological Studies of the Public Museum." School and Society, vol. 33, no. 839 (Jan. 24, 1931), pp. 121-125.

References 126, 128 and 129 disclose Robinson's thinking, and describe his museum research and much of the rationale behind it.

130. _____. "Psychology and the Public Policy." School and Society, vol. 37, no. 957 (April 29, 1933), pp. 537-543.

References 130 and 131 present suggestions for experimental studies and how to assess them in order to develop education programs.

131. _____. "The Psychology of Public Education." American Journal of Public Health, vol. 23 (1933), pp. 123-128.

132. ROBINSON, PAUL VIRGIL. "An Experimental Study of Exhibit Arrangement and Viewing Method to Determine Their Effect Upon Learning of Factual Material." Doctoral dissertation, University of Southern California, 1960.

Review of much of the existing literature (ca. 1960) on learning from exhibits and research on school children's reactions to exhibit materials.

133. SARBAUGH, LARRY. Summary of Exhibit Evaluation, International Livestock Show. Washington, D.C.: Publications Research, U.S. Department of Agriculture, 1961.

Summary of a multiple measurement study of a livestock exhibit, using mail survey, interview, counting, and timing visitor traffic.

134. SASLOW, STEVEN. "Survey of Science Museum Use and Attitudes in a Northwest Inner City High School." Pages 27-29 in Opportunities for Extending Museum Contributions to Pre-College Science Education, edited by Katherine J. Goldman. Washington, D.C.: An informal publication of the Smithsonian Institution, 1970.

Survey of racially mixed students from an inner city school and their feelings about using a science museum.

135. SCHMID, FREDERICK. "Can Museums Predict Their Future?" Museum News, vol. 52, no. 3 (Nov. 1973), pp. 48-51.

Discussion of history of museums and psychology and the author's perceptions of museum-visitor interaction.

136. SCHWARTZ, STEVEN. "A Picture of Oakland Museum Visitors." Master's thesis, San Francisco State College, 1971.

Case history of a museum-community conflict over decision-making in the museum, with a survey describing the Oakland Museum visitor.

137. SCREVEN, C. G. "Learning and Exhibits: Instructional Design." Museum News, vol. 52, no. 5 (Jan. - Feb. 1974), pp. 67-75.

Instructional aids that can facilitate learning in museums and their implications for visitor research are presented.

137a. SCREVEN, C. G. The Application of Programmed Learning and Teaching Systems Procedures for Instruction in a Museum Environment. Final Report, Project No. 7-0138, Contract No. OEG 3-7-070138-2882. Washington, D.C.: Bureau of Research, U. S. Department of Health, Education and Welfare, 1970.

Learning systems technology is applied to existing exhibits as a means of enhancing their instructional effectiveness at the Milwaukee Public Museum.

138. _____. "The Museum as a Responsive Learning Environment." Museum News, vol. 47, no. 10 (June 1969), pp. 7-10.

Discussion of planned learning programs for exhibits and their potential.

139. _____. The Measurement and Facilitation of Learning in the Museum Environment: An Experimental Analysis. Washington, D.C.: Smithsonian Institution Press, 1974.

Reviews effort to use systematic experimentation and the application of learning psychology to increase visitor learning from exhibits.

140. _____. "The Programming and Evaluation of an Exhibit Learning System." Pages 129-137 in Opportunities for Extending Museum Contributions to Pre-College Science Education, edited by Katherine J. Goldman. Washington, D.C.: An informal publication of the Smithsonian Institution, 1970.

Description of a museum education experiment utilizing self-testing devices and guidance systems.

141. _____. "Public Access Learning: Experimental Studies in a Public Museum." Pages 226-234 in The Control of Human Behavior, vol. 3, edited by Roger Ulrich, Thomas Stachnik, and John Mabry. Glenview, Ill: Scott, Foresman and Co., 1973.

Summary of some of the author's programmed instruction experiments in museums.

141a. SCREVEN, C. G., and ROBERT A. LAKOTA. "An Experimental Study of Learning in a Museum Environment." Proceedings, American Psychological Association, Miami, Florida, 1970.

Summary of a series of studies investigating the application of programmed instruction to increase visitor learning from existing museum exhibits.

142. "Seattle Fair Exhibit Study." Bell Telephone Exhibit, Business Research Division, 1962. (mimeograph)

Report on visitor-count data for a world's fair exhibit.

143. SEGER, JON, and SAMUEL C. RIZZETTA. Some Educational Considerations Relating to Public Activities of the National Museum of Natural History. Washington, D.C.: An informal publication of the Smithsonian Institution, 1971.

Aimed at developing a more active museum education program but also presents behavioral criteria for visitor learning.

144. SHEPPARD, D. "Methods for Assessing the Value of Exhibitions." British Journal of Educational Psychology, vol. 30 (1960), pp. 259-265.

Reviews problems encountered when using interviews to assess exhibit effects.

145. SHETTEL, HARRIS H. Atoms in Action Demonstration Center: Impact Studies: Dublin, Ireland, and Ankara, Turkey. Technical Report No. AIR-F58-11/67-FR. Pittsburgh: American Institutes for Research, 1967.

Measurement of government exhibits and their impact.

146. _____. "Exhibits: Art Form or Educational Medium?" Museum News, vol. 52, no. 1 (Sept. 1973), pp. 32-34.

Demonstrates that worthwhile studies of exhibit effectiveness can be designed and completed, but they require experimentation and use of measurements besides survey questions.

147. SHETTEL, HARRIS H. An Evaluation Model for Measuring the Impact of Overseas Exhibits. Technical Report No. AIR-F28-6/66-FR, Contract No. NY-66-354. Washington, D.C.: U.S. Atomic Energy Commission, 1966.

Analysis of methodological problems involved in measuring visitor reactions to traveling exhibits. Of particular importance is the difficulty of testing for attitude change under the short exposure conditions of exhibit visitation.

148. _____. "An Evaluation of Existing Criteria for Judging the Quality of Science Exhibits." Curator, vol. 11, no. 2 (1968), pp. 137-153.

A distilled version of reference 149.

149. _____, and PAMELA C. REILLY. An Evaluation of Existing Criteria for Judging the Quality of Science Exhibits. Pittsburgh: American Institutes for Research, 1965.

Indicates the difficulty in getting respondents to agree on criteria of exhibit effectiveness and shows the need for clearer statements of exhibit objectives. An exhibit evaluation form is appended.

150. _____, and SANFORD P. SCHUMACHER. Atoms in Action Demonstration Center: Impact Studies: Caracas, Venezula and Cordoba, Argentina. Technical Report No. AIR-F58-3/69-FR. Pittsburgh: American Institutes for Research, 1969.

(See reference 145.)

151. _____, MARGARET BUTCHER, TIMOTHY S. COTTON, JUDI NORTHRUP, and DORIS CLAPP SLOUGH. Strategies for Determining Exhibit Effectiveness. Technical Report No. AIR-E95-4/68-FR. Pittsburgh: American Institutes for Research, 1968.

Comprehensive source on methods for improving exhibit impact upon visitors.

152. SILBERGLITT, BURTON STUART. "The Use of Audio and Prosthetic Devices to Improve and Evaluate Exhibit Effectiveness." Doctoral dissertation, University of Wisconsin-Milwaukee, 1972.

Study of the methodology used to evaluate the effectiveness of two types of participatory response devices in the museum, in which visitors are tested for their learning of specific information about art.

153. SMITES, EDWARD J. "A Suburban Museum Looks at Its Visitors." Museum News, vol. 42, no. 9 (May 1964), pp. 30-34.

Guidelines for completing a demographic visitor survey.

154. SPORER, WILLIAM. "Presentation of Exhibit Techniques to Determine Their Effectiveness." Midwest Museums Quarterly, vol. 13, no. 1 (1953), pp. 16-18.

General discussion of methods of audience engagement and measurement.

155. SRIVASTAVA, RAJENDRA K., and THOMAS S. PEEL. Human Movement as a Function of Color Stimulation. Topeka, Kansas: The Environmental Research Foundation, 1968.

The hodometer tests visitor sensitivity to changes that included the wall color of the gallery. (See references 8 and 9.)

156. "Statistics Regarding the Bell Telephone Exhibit at the New York World's Fair 1939 and 1940." Bell Telephone Exhibit, Business Research Division, 1940. (mimeograph)

References 156-157 and 159 are summary reports of visitor attendance counts.

157. "Statistics Regarding the Impact of the Bell Telephone Exhibit at the Chicago Fair of 1950." Bell Telephone Exhibit, Business Research Division, 1950. (mimeograph)

158. STITES, RAYMOND S. "Leisure Time and the Museum: A Reply." Museum News, vol. 41, no. 6 (Feb. 1963), pp. 29-33.

Expansion of Morris's theories on the social nature of museum visiting. (See reference 91.)

159. "Summary of Attendance at the Bell System Exhibit During the 1964-65 New York World's Fair." New York Telephone Company and Business Research Division, American Telephone and Telegraph Company, December 1965. (mimeograph)

160. TAYLOR, FRANK A. "A National Museum of Science, Engineering and Industry." The Scientific Monthly, vol. 63 (1946), pp. 359-365.

Proposes a visitor-oriented floor plan for a science and industry museum, in which the parallel gallery concept is demonstrated.

161. _____. "Research in Exhibits." Prepared for the Southeastern Museums Conference, Norfolk, Virginia, 1968. (mimeograph)

Discussion of visitor research which is sensitive to the problems encountered in doing psychological studies in museums.

162. _____, and KATHERINE J. GOLDMAN. "Surveys Surveyed." Pages 15-20 in Opportunities for Extending Museum Contributions to Pre-College Science Education, edited by Katherine J. Goldman. Washington, D.C.: An informal publication of the Smithsonian Institution, 1970.

The limitations of visitor surveys are mentioned, especially the lack of good pre-college data to assist museum educators.

163. TAYLOR, JAMES B. Science on Display: A Study of the United States Science Exhibit, Seattle World's Fair, 1962. Seattle: Institute for Sociological Research, University of Washington, 1963.

Study of a world's fair science center in which investigators look at crowd flow, visitor learning, and influence of exhibits on attitudes towards science, and make recommendations for exhibit design.

164. ULLMANN, DARRELL A. Attraction Sign Survey. Nebraska Department of Roads and Nebraska Department of Economic Development, 1972.

Study of the effectiveness of highway signs on travelers' choices measured by a survey and a field experiment. Data collected on planned and unplanned stops by travelers is germane to determining how to attract visitors to museums.

165. United States Information Agency. "Audience Reactions to the U.S. Rural Development Exhibit at Lahore." (Number 40 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, September 1960.

Items 165-184 are a series of USIA reports on how U.S. exhibits in foreign countries and territories influenced attitude change.

166. United States Information Agency. "Follow-Up Study of Visitor Reaction to the U.S. versus Major Competing Exhibits at the Brussels International Fair." (Number 38 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, June 1959.

167. _____. "Highlights of USIA Research on the Presidential Trade Fair Program." (Number 34 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency. November 1958.

168. _____. "The Impact of the U.S. Capitalism Exhibit at the Bogota Trade Fair." (Number 13 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, April 18, 1957.

169. _____. "The Impact of the U.S. Exhibit at the Bangkok International Trade Fair." (Number 16 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, June 7, 1957.

170. _____. "The Impact of the USIA Exhibit 'Youth USA' at the 1960 Berlin Industrial Fair." (Number 46 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, April 1961.

171. _____. "The Impact of the U.S. Industrial Exhibit at the Tokyo International Trade Fair." (Number 19 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, September 12, 1957.

172. _____. "The Impact of the U.S. Trade Fair Program: An Analysis of Visitor Reaction in the Far East, South Asia, Europe and Latin America." (Number 3 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, January 25, 1956.

173. _____. "The Impact of the U.S. Trade Fair Program: An Analysis of Visitor Reactions in Kabul, Afghanistan." (Number 10 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, December 30, 1956.

174. United States Information Agency. "The Impact of the U.S. Trade Fair Program at the Izmir International Fair." (Number 12 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, April 8, 1957.

175. _____. "A Note on Reactions of Brussels Fair Visitors to Modern Art in the U.S. Pavilion." Special memorandum. Washington, D.C.: Research and Reference Service, United States Information Agency, February 1959.

176. _____. "Opinion Leader's Evaluation of the U.S. Exhibit at the Salonika Trade Fair." (Number 11 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, December 30, 1956.

177. _____. "Reactions of Indian Visitors to USIS Exhibit 'Student Life in America.'" (Number 63 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, May 1962.

178. _____. "Reactions of Visitors to the U.S. Small Industries Exhibition at Accra." (Number 62 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, April 1962.

179. _____. "Turkish Trade Fair Audience Reaction to Questions on American Aid and Related Matters." (Number 15 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, May 17, 1957.

180. _____. "The United States Exhibit and the 1955 Djakarta Fair." (Number 4 in Survey Research Studies.) Washington, D.C.: Research and Reference Service, United States Information Agency, December 15, 1955.

181. _____. "Visitor Reaction to the U.S. Exhibit at the Ceylon Trade Fair." (Number 4 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, May 21, 1956.

182. _____. "Visitor Reaction to the U.S. Exhibit at the Paris Trade Fair, 1956." (Number 6 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, July 27, 1956.

183. United States Information Agency. "Visitor Reaction to the U.S. versus Major Competing Exhibits at the Brussels International Fair." (Number 29 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, July 1958.

184. _____. "Visitor Reaction to the U.S. versus Major Competing Exhibits at the 1958 Zagreb Trade Fair." (Number 35 in Program and Media Series.) Washington, D.C.: Research and Reference Service, United States Information Agency, December 1958.

185. VAN DER HOEK, G. J. "Bezoekers Bekeken." Mededilingen, Gemeentemuseum van den Haag, vol. 2, no. 2 (1956). (English summary)

Survey of visitors on admission-free days, in which uses of visitor-orientation rooms and group activities to attract new visitors to the museum are considered.

186. _____, and THEA VAN EIJNSBERGEN. "Audience Research in the Netherlands." Museums' Annual, no. 2 (1970), pp. 15-16.

Analysis of surveys revealing that museums inadvertently support pressures that inhibit the museum visits of non-professional and less educated people.

187. VOWLES, VALERIE. "The Public." Museum: A Quarterly Review, vol. 16, no. 1 (1963), pp. 153-155.

Sociological survey of the Uganda museum which discovered that the museum communicated with its public, but that the level of comprehension was much lower than expected.

188. WASHBURN, WILCOMB E. "Defining the Museum's Purpose." Paper read at the New York State Historical Association, Cooperstown, New York, 1973. (mimeograph)

Museum professionals are urged to do more visitor-related research and consider their institutional goals according to educational change.

189. WEINER, GEORGE. "Why Johnny Can't Read Labels." Curator, vol. 6, no. 2 (1963), pp. 143-156.

Description of all aspects of labeling, such as length, content, and the size, type, and positioning of lettering, and the effects these elements have on the museum visitor.

190. WEISS, ROBERT S., and SERGE BOUTOURLINE, Jr. "The Communication Value of Exhibits." Museum News, vol. 42, no. 3 (Nov. 1963), pp. 23-27.

References 190-192 comprise an extensive study of the Seattle World's Fair involving monitoring traffic flow, lines and congestion, the effects of exhibit techniques on the audience, and the teaching potential of exhibits. Speculations on crowd flow and experiments with children's exhibits are also included.

191. _____. Fairs, Exhibits, Pavilions, and Their Audiences. Published by the authors, 1962.

192. _____. A Summary of Fairs, Pavilions, Exhibits, and Their Audiences. Published by the authors, 1962.

193. WELLS, CAROLYN H. Smithsonian Visitor. Washington, D.C.: An informal publication of the Smithsonian Institution, 1970.

Profiles of typical Smithsonian visitors, who they are, where they are from, and what motivated them to come.

194. WHITE, HARVEY E. The Design, Development and Testing of a Response Box, a New Component for Science Museum Exhibits. HEW Project No. 3148, Contract No. OE6-10-056. Berkeley: University of California, 1967.

Description of different response boxes designed to help museums determine if an exhibit is a successful teaching medium and to increase visitor interaction with exhibit materials.

195. WHITE, RALPH K. "Soviet Reactions to Our Moscow Exhibit: Voting Machines and Comment Books." Public Opinion Quarterly, vol. 23 (Winter 1959-1960), pp. 461-470.

Analysis of Soviet reactions to an American exhibit and possible influences on such attitudes. Biases impeding accurate evaluation of exhibits are also considered.

196. WIEGMAN, PAUL G., and PAMELA M. WIEGMAN. "Demographic Study." (Number 2 in Fellowship Reports.) Pittsburgh: Carnegie Museum of Natural History, 1972.

References 196-198 outline some of the authors' work on a visitor description study at the Carnegie Museum of Natural History and an observational study to determine the kinds of questions asked by visitors about exhibits and whether or not visitors were recalling language learned from the exhibit script.

197. _____. "Evaluation in Museums." (Number 5 in Fellowship Reports.) Pittsburgh: Carnegie Museum of Natural History, 1972.

198. _____. "The Smithsonian Grasshopper." Office of Museum Programs, Smithsonian Institution, 1973. (unpublished report)

199. WINKEL, GARY H., and ROBERT SASANOFF. "An Approach to an Objective Analysis of Behavior in Architectural Space." Pages 619-630 in Environmental Psychology: Man and His Physical Setting, edited by Harold M. Proshansky, William H. Ittelson and Leanne G. Rivlin. New York: Holt, Rinehart and Winston, Inc., 1970.

Investigation of how well a specific architectural space in a specific museum could be simulated within a laboratory setting. (See also references 149 and 151.)

200. WITTLIN, ALMA S. "Hazards of Communication by Exhibits." Curator, vol. 14, no. 2 (1971), pp. 138-152.

Highlights some of the ways exhibit design can fail because it is not well matched to the visitor's physical and psychological constitution.

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